

# Illinois EPA

## Stream Quality Monitoring Intensive Basin Survey Program

Joe Marencik

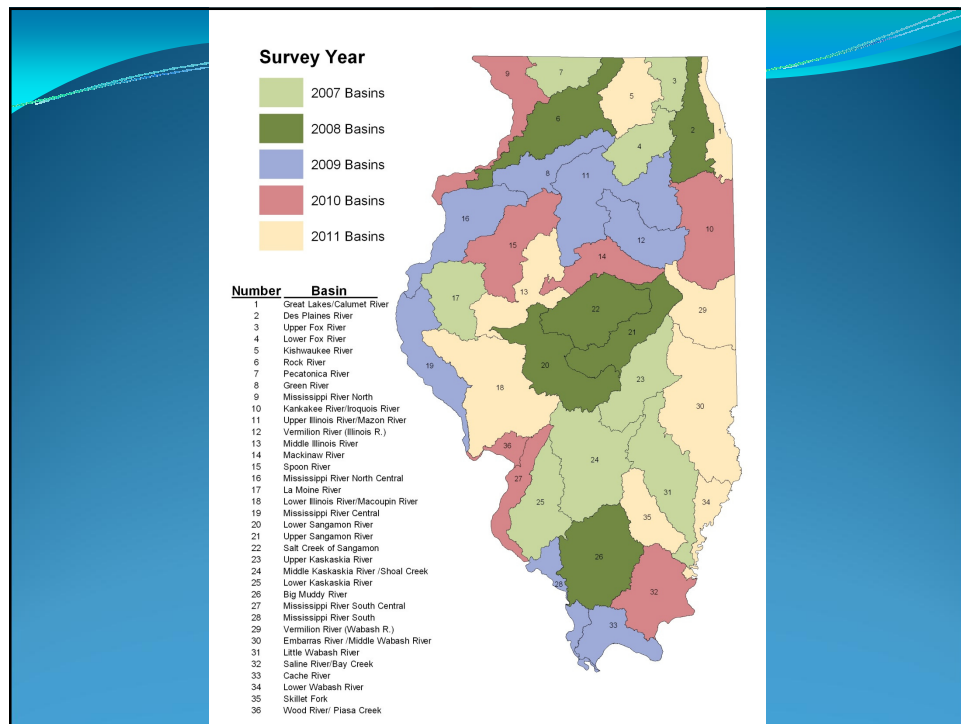
Northern Monitoring & Assessment Unit -Des Plaines



## Illinois EPA

### Northern Monitoring & Assessment Unit

- Collect and assess water resource related data in the northern third of the state
  - 6 Main Programs – rivers, streams, lakes, Lake Michigan
- North Mill Creek sampling was conducted under the Intensive Basin Survey program (IBS)
  - 5-year rotational basis
    - NMU – 45-70 sites/year (>120 state wide)
    - 2-3 watershed/cycle
  - Data is used in IEPA's *Biannual Integrated Water Quality Report*

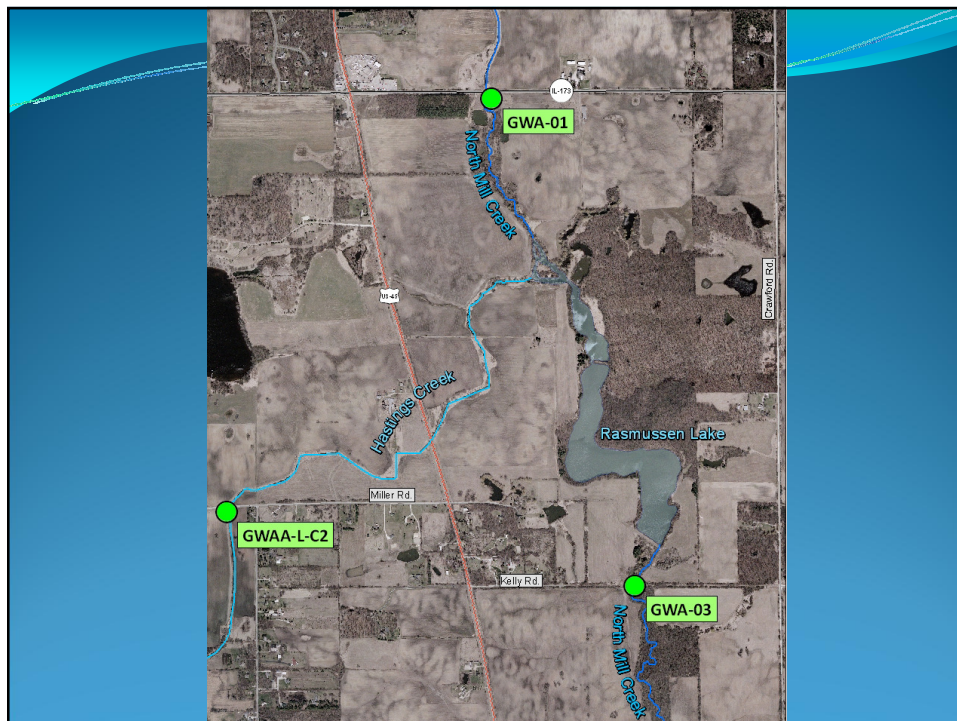


## Intensive Basin Survey Program

- Field Parameters – Temp, DO, pH, conductivity, discharge
- Water Chemistry – Alkalinity, chloride, fluoride, sulfate, TSS, VSS, TOC, phosphorus (T&D), total nitrogen, ammonia, TKN, cyanide, phenols, metals
- Macroinvertebrates
- Fish
- Habitat

## 2008 IBS Des Plaines River Watershed

- 30 Total Sites in 2008
- 3 sites within the North Mill Creek Watershed
  - GWA-01@ Route 173 (Long-term IBS site)
  - GWA-03@ Kelly Rd. (LCFPD/SMC request)
  - GWAA-L-C2 @ Miller Rd. (LCFPD/SMC request)  
~ previous Facility Related Stream Survey site



# Water Chemistry

- GWA-01 (North Mill @ Rt. 173)
  - Sediment - elevated levels of arsenic and potassium
- GWA-03 (North Mill @ Kelly Rd.)
  - Sediment - elevated levels of potassium, manganese, TKN, and phosphorus in
- GWAA-L-C2 (Hastings @ Miller Rd.)
  - Exceedance of Narrative Criteria for phosphorus
  - Sediment - Elevated levels of Arsenic and potassium



# Macroinvertebrates

- GWA-01 (North Mill @ Rt. 173)
  - 36 Genera
  - **Fair rating** (mIBI = 37.1)
- GWA-03 (North Mill @ Kelly Rd.)
  - 11 Genera
  - **Fair rating** (mIBI = 36.7)
- GWAA-L-C2 (Hastings @ Miller Rd.)
  - 29 Genera
  - **Fair rating** (mIBI = 30.8)



## Fish

- GWA-01 (North Mill @ Rt. 173)
  - 6 native species
  - **Poor conditions** (fIBI = 15)
- GWA-03 (North Mill @ Kelly Rd.)
  - 8 native species
  - **Poor conditions** (fIBI = 16)
- GWAA-L-C2 (Hastings @ Miller Rd.)
  - 4 native species
  - **Poor conditions** (fIBI = 11)



## Habitat

- GWA-01 (North Mill @ Rt. 173)
  - Heavy siltation
  - **Fair condition** (QHEI=58)
- GWA-03 (North Mill @ Kelly Rd.)
  - **Fair Condition** (QHEI=57)
- GWAA-L-C2 (Hastings @ Miller Rd.)
  - Moderate siltation
  - **Poor condition** (QHEI=44)



# Overall IEPA Use Assessment

- GWA-01 (North Mill @ Rt. 173)
  - ***Nonsupport***
  - Degraded Macroinvertebrate and fish communities
  - Heavy siltation
- GWA-03 (North Mill @ Kelly Rd.)
  - ***Nonsupport***
  - Degraded macroinvertebrate and fish communities
- GWAA-L-C2 (Hastings @ Miller Rd.)
  - ***Nonsupport***
  - Degraded macroinvertebrate and fish communities
  - Moderate siltation

Wisconsin DNR  
Dutch Gap Canal/North Mill Creek  
Biological Assessments





## WI DNR Biological Assessments

- Macroinvertebrates (2005)
  - 35 Species
  - HBI – 7.417
  - *Fairly Poor* – significant organic pollution
- Fish
  - 2003 – 5 species (*Very Poor*)
  - 2005 – 3 species (*Too low to calculate*)
  -

Questions?

